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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/635,988	08/09/2000	Thomas B. Brown	MS1-565US	5702

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EXAMINER	
EL CHANTI, HUSSEIN A	

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 01/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/635,988	BROWN ET AL.	
	Examiner	Art Unit	
	Hussein A El-chanti	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-15,26,27,31,34 and 37* is/are pending in the application.

4a) Of the above claim(s) *1-6,8,16-24,28-30,32,33,35,36,38-41 and 43-48* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-15,26,27,31,34 and 37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to restriction election received on Nov. 17, 2004. Claims 9-15, 26-27, 31, 34 and 37 were elected without traverse. Claims 1-6, 8, 16-24, 28-30, 32, 33, 35, 36, 38-41 and 43-48 were canceled. Claims 9-15, 26-27, 31, 34 and 37 are pending examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9-15, 26-27, 31, 34 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Esaki et al., U.S. patent No. 6,643,259 (referred to hereafter as Esaki).

Esaki teaches the method explicitly as claimed including temporarily storing the data packets sent from the input modules and for generating and sending a dummy packet to the communication channel when the amount of the data packets temporarily stored therein exceeds a predetermined threshold value (see abstract).

As to claims 9, 31 and 34, Esaki teaches a method, computer readable medium and apparatus for facilitating speedy communication of packets between entities on a network, the method comprising:

sending a set of packets from a sending entity to a receiving entity, wherein a transmission delay between packets in the set is intolerable (see col. 3 lines 30-41, packets are sent to input modules where contention is being monitored);

immediately thereafter, sending at least one "push" packet to avert a transmission delay between packets in the set, wherein the delay is caused by packet buffering of a communication device on the network (see col. 3 lines 40-55, when a possible contention is detected, a dummy "push" packet is transmitted).

As to claim 26, Esaki teaches a method for facilitating bandwidth measurement between two entities on a network, the method comprising:

sending a pair of bandwidth-measurement packets from a sending entity to a receiving entity, wherein a transmission delay between packets in the pair is intolerable (see col. 3 lines 30-41, packets are sent to input modules where contention is being monitored);

immediately thereafter, sending at least one "push" packet to avert a transmission delay between packets in the pair, wherein the delay is caused by packet buffering of a communication device on the network (see col. 3 lines 40-55, when a possible contention is detected, a dummy "push" packet is transmitted).

As to claim 15, Gunninberg teaches a computer-readable medium having computer executable instructions that, when executed by a computer, performs the method as recited in claim 9 (see the rejection of claim 9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Esaki.

Esaki teaches a method comprising sending a set of packets from a sending entity to a receiving entity, wherein a transmission delay between packets in the set is intolerable (see col. 9 lines 27-42); and immediately thereafter, sending at least one "push" packet to avert a transmission delay between packets in the set, wherein the delay is caused by packet buffering of a communication device on the network (see col. 9 lines 43-63).

Esaki does not explicitly teach the communication device is a proxy server. Official notice is taken as evident by Microsoft Computer Dictionary that one of the ordinary skill in the art at the time of the invention would perform bandwidth measurement on a proxy server because using a proxy server can improve performance by supplying frequently requested data and discard inappropriate requests.

4. Claims 10, 11, 13-15, 27 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esaki in view of Gunninberg.

As to claim 10, Esaki teaches a method, computer readable medium and apparatus for facilitating speedy communication of packets between entities on a network, the method comprising sending a set of packets from a sending entity to a receiving entity, and immediately thereafter, sending at least one "push" packet to avert a transmission delay between packets in the set.

Esaki does not explicitly teach the limitation “two packets sent back-to-back”. However Gunninberg teaches a method of determining a connection bandwidth by

sending back-to-back packets, and considering the delays and congestion situations that occurs on a server (see Page 413).

It would have been obvious for one of the ordinary skill in the art at the time of the invention to modify Esaki by sending back to back packets to determine a bandwidth of a connection as taught by Gunninberg because doing so would allow the system to evaluate the bandwidth more accurately by taking multiple values for the bandwidth and averaging the results.

As to claim 11, Gunninberg teaches a method as recited in claim 9, wherein the set of packets are bandwidth-measurement packets for measuring bandwidth between the sending entity and the receiving entity (see Page 413).

As to claim 13, Gunninberg teaches a method as recited in claim 9, wherein the network is TCP (see Page 413).

As to claim 14, Gunninberg teaches a program module having computer-executable instructions that, when executed by a computer, performs the method as recited in claim 9 at an application layer in accordance with an OSI model (see Page 413).

As to claim 27, Gunninberg teaches a method as recited in claim 26 further comprising receiving a bandwidth calculation based upon measurements related to the pair of packets (see Page 413).

As to claim 37, Gunninberg teaches a modulated data signal having data fields encoded thereon transmitted over a communications channel, comprising:

a field including a "push" packet facilitating minimization of to transmission delay between the first and second packets, wherein the delay is caused by packet buffering of a communication device on the network (see col. 3 lines 30-55).

Esaki does not explicitly teach the limitation "two packets sent back-to-back". However Gunninberg teaches a method of determining a connection bandwidth by sending back-to-back packets, and considering the delays and congestion situations that occurs on a server (see Page 413).

It would have been obvious for one of the ordinary skill in the art at the time of the invention to modify Esaki by sending back to back packets to determine a bandwidth of a connection as taught by Gunninberg because doing so would allow the system to evaluate the bandwidth more accurately by taking multiple values for the bandwidth and averaging the results.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Auto-detection of limiting factors in a TCP connection by Bonga, U.S. Patent No. 6,772,375
- Selective use of transmit complete interrupt delay on small sized packets in an ethernet controller by Carlson, U.S. Patent No. 6,765,878
- Apparatus for and method of measuring communication performance by Aoki et al., U.S. Patent No. 6,757,255

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A El-chanti whose telephone number is (571)272-3999. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hussein Elchanti

Dec. 17, 2004

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